MONTHLY WEATHER REPORT.

MARCH 1886.

SECTION I.

General Summary for the Month.

The weather of March was of two distinct kinds, one (from the 1st to the 17th) marked by cold wintry features, accompanied, for the greater part, by dry Easterly winds, but occasionally by heavy falls of snow and sharp frost; the other (from the 18th to the 31st), mild and almost springlike, in which the dominant winds were Southerly and South-westerly, the temperature high, the air mild and soft, and the rainfall large. The change from the one period to the other was exceptionally well defined, but the mean results of the two periods of extreme weather show that, taken as a whole, pressure was rather in excess of the average conditions for March, temperature slightly in defect, the winds more easterly than usual, and the rainfall in excess at many of the western stations, but in defect in the north of Scotland and the south of Ireland, as well as in some localities over England.

March 1–6.—This was a period of changeable but cold weather, during which the dominant pressure systems were cyclonic, but the type of distribution variable on the night of the 1st, the lowest temperature of the whole winter 2°·7 F. was recorded at Vienna. Two well developed cyclonic areas passed over us from west to east, the centre of one (No. XIX.*) advancing immediately over the central parts of England, while the other (No. XX.*) took a more southerly track, and travelling south-eastwards across France on the 5th, passed away over Italy and the Adriatic, and disappeared entirely from Europe during the 7th. The alternations of weather and the variations in the direction and force of the wind during this interval were therefore very great. The thermometer rose as the Southerly winds in front of the first disturbance set in; but as its centre advanced the wind backed into East and North-east on the northern side of its track, with a falling thermometer; large quantities of snow fell over all the north-western and northern parts of the kingdom, doing much damage, while in the south the wind veered round through North-west to North, and, after much rain and snow, the sky cleared, the wind lulled, and sharp frost set in. By 8 a.m. on the 4th the centre of the earlier system had passed out of our area to the eastward, but at evening of the same day there were indications of the advance of the new disturbance in the south-west. The wind drew round to South-east and East, except in the north, and, with a temporary rise of the thermometer rain again set in over our south-western districts and France, subsequently changing to sleet and snow as the centre advanced towards the Channel Islands, after which the wind backed round to North, a steady frost set in, the temperature on the night of the 6th falling as low as 16° at Loughborough and 7° at Upper Tean in Staffordshire. (No. VI., p. 32) came over the United Kingdom from the westward.

Over the eastern and central parts of the continent the distribution of pressure during this time was at first anticyclonic, and the weather very cold and dry. As, however, the first of the two depressions mentioned above advanced, the anticyclone moved away in an easterly direction, and milder, but much less settled weather spread over Germany and the western

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* See Section II. and Map 2 Plate VI., for the history and tracks of depressions.

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parts of Russia, with Westerly and varying winds. The second depression, however, on reaching southern Europe brought about a North-easterly breeze over North Germany, and the frost again increased in intensity, especially over Finland and Northern Russia.

March 7–17.—The distribution of pressure now became anticyclonic, the system advancing over our Islands and the North Sea from the westward, increasing both in size and height as it did so, and bringing with it very cold weather. By the 8th its centre lay over the North Sea, and on the following morning it had reached Holstein. For a time the barometer fell at our western stations, and there is evidence that at least one large depression passed northwards outside our western coasts, at such a distance from our Islands that its movements cannot be shown on Map 2, Plate VI. The wind consequently rose to a strong gale from South-east in the west (see Charts in the Daily and Weekly Weather Reports for the 9th), but while the 8 a.m. temperatures increased to a little above 40° on our extreme south-western coasts they decreased over England, where a steady frost set in with dry weather. On the 10th the low-pressure systems in the far west were evidently passing away, the anticyclone in the east took up a more northerly position, and spread gradually to the westward over the whole of the United Kingdom. The wind became more Easterly, and blew very freshly, temperature remained low, and the air was exceedingly dry. It is remarkable how little change of importance there was over North-western Europe from this time until the 15th, beyond a daily fall of sleet in the north-east. Then, however, with the appearance of the north-eastern portion of a cyclonic system at a great distance outside our extreme south-western coasts, and an easterly movement of the anticyclone in the north, the wind began to veer a little in the south of Ireland, and to increase in force, while sleet and snow showers became rather more general, but the frost still held. On the 16th pressure varied from 30·7 inches and upwards over the Gulf of Bothnia, to somewhat below 29·8 inches over the Bay of Biscay; the winds had backed to north-east, and frost still prevailed over the United Kingdom. A more permanent change, however, soon set in, for on the 17th the barometer began to fall decidedly in the west, while the anticyclone in the north moved south-eastwards, and the wind began to veer round towards South-east over our western districts, and increase greatly in force, with sleet, rain and an unsettled appearance.

Throughout nearly the whole of this period frost and dry Easterly winds prevailed over the Continent, with anticyclonic conditions and slight gradients. It was not until the 14th that any cyclonic system appeared, but at 8 a.m. on that date a shallow one showed itself near Toulon, and spreading thence in a northerly and easterly direction covered northern Italy, Switzerland, and Austria by 8 a.m. on the 16th, and produced snow very generally over Central Europe, with some recovery of temperature. This system, however, subsequently moved south-eastwards to Turkey, and it was left to the Atlantic depressions mentioned below to bring in the South-westerly winds, and mild rain, which for a time closed the long winter over Western Europe.

March 18–19.—The weather of this period was transitional, for, while the anticyclone over Scandinavia began to move in a south-easterly direction, some large and apparently deep depressions arrived off our western coasts, and moving northwards caused the wind to veer to the Southward very generally, and to blow strongly in the west (see cyclonic system No. XXI.*). Temperature consequently rose very decidedly, first at the western and north-western stations, and afterwards in the east. The frost disappeared rapidly, and instead of the harsh, dry, Easterly winds so prevalent during this winter, mild soft breezes from South-east and South were experienced very generally, with rain at all but the eastern stations. The amount of rainfall, however, was small everywhere, when considered in connexion with the completeness of the change of weather which had occurred.

March 20–25.—During this period the distribution of pressure was partly cyclonic and partly anticylonic, the gradients were moderate, and favourable for Southerly winds, which prevailed very generally, and at times blew hard in the extreme west. No depression

* See Section II. and Map 2 Plate VI., for the history and tracks of depressions.

of importance came within our area during this period, but some such systems were evidently passing in a northerly direction far outside the west of Ireland, their passage being marked by a decided increase in the strength of the Southerly wind at our western stations, together with slight variations of pressure and wind-direction. The air during this interval was warm, the daily maxima frequently rising above 60°, and on one occasion reaching 65° in some parts of Great Britain. The weather was very showery, over all the western districts, and at times in the east also.

From the 18th to the 20th pressure remained high over the Continent, and the weather was quiet. Over Russia and the Baltic the air was very cold, but the weather fair. On the 21st and 22nd, however, owing to a very shallow disturbance over Russia, the air became a little milder and the weather unsettled, while Westerly winds set in over Germany, but by the 23rd the Continental anticyclone had been re-formed, and the cold again became severe.

March 26–31.—The distribution of pressure over our Islands now became more decidedly cyclonic, and the type of gradient favourable for the prevalence of South-westerly to Westerly winds. The wind consequently veered very generally, with some fall of temperature and depressions (Nos. XXIII. to XXV.*) soon appeared in the north-west and west, causing gales in most places, but especially in the west and north. Rain became heavier and more general than it had been previously, and the clouds were heavy. The first of these depressions developed a well-marked subsidiary disturbance over Ireland (see Map for 8 a.m., 27th), and a "hollow" over the western and south-western parts of England and afterwards over the North Sea. These, however, filled up, and there followed the two important depressions (Nos. XXIV. and XXV.), which travelled north-eastwards with great rapidity over the north-western and northern parts of our Islands, causing South-westerly and Westerly gales and rain in all parts of the kingdom (exceptionally severe in the north-west of Ireland) and hail in some places. As the month closed these disturbances were passing away, but the barometer remained high in the south and low in the north, the gradients were steep, and the general appearance of the sky very unsettled.

Over the Continent during this period the large anticyclone moved slowly to the south-eastward, and as the South-westerly current of wind spread eastwards over northern Europe the thermometer rose, and the frost disappeared entirely from Europe. On the morning of the 31st temperature varied from nearly 60° in the south-west of France and from between 40° and 50° over England and the north of France and North Germany, to about 35° over Finland and Russia.

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